

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.-14. (cancelled)

15. (new) A purified metalloprotease comprising an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1 or an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1 wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, and wherein said metalloprotease has aggrecanase activity.

16. (new) A purified metalloprotease comprising an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1 or an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1 wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, and wherein said metalloprotease has aggrecanase activity.

17. (new) A purified metalloprotease comprising an amino acid sequence selected from the group consisting of an amino acid sequence represented by amino acids 1-950 of SEQ ID NO:1, an amino acid sequence represented by amino acids 1-687 of SEQ ID NO:1, an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-950 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-687 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1, and any one of said sequences wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, and wherein said metalloprotease has aggrecanase activity.

18. (new) A purified metalloprotease comprising an amino acid sequence which has 90% or more sequence homology with the amino acid sequence set forth in SEQ ID NO:1, wherein said metalloprotease has aggrecanase activity.

19. (new) An isolated polynucleotide which encodes a metalloprotease having aggrecanase activity of any one of claims 15-18.

20. (new) A cloning or expression vector comprising the polynucleotide of claim 19.

21. (new) A host cell transformed with the vector of claim 20.

22. (new) A method for producing a metalloprotease having aggrecanase activity and comprising an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1 or an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1 wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, said method comprising a) culturing the host cell of claim 21 under conditions such that said host cell expresses said metalloprotease, and b) recovering the metalloprotease so expressed.

23. (new) A method for producing a metalloprotease having aggrecanase activity and comprising an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1 or an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1 wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, said method comprising a) culturing the host cell of claim 21 under conditions such that said host cell expresses said metalloprotease, and b) recovering the metalloprotease so expressed.

24. (new) A method for producing a metalloprotease having aggrecanase activity and comprising an amino acid sequence selected from the group consisting of an amino acid sequence represented by amino acids 1-950 of SEQ ID NO:1, an amino acid sequence

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represented by amino acids 1-687 of SEQ ID NO:1, an amino acid sequence represented by amino acids 1-583 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-950 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-687 of SEQ ID NO:1, an amino acid sequence represented by amino acids 213-583 of SEQ ID NO:1 and any one of these sequences wherein from 1 to 10 amino acid residues are substituted, deleted and/or inserted, said method comprising a) culturing the host cell of claim 21 under conditions such that said host cell expresses said metalloprotease, and b) recovering the metalloprotease so expressed.